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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,410	08/27/2001	Chun-Hsien Lee	CFP-1436	4341

7590 10/22/2003

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EXAMINER

FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/940,410

Applicant(s)

LEE, CHUN-HSIEN

Examiner

Justin R Fischer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) 5,9 and 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7,13 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 8,10,12,14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of a method for bonding a coating to a material web in Paper No. 2 is acknowledged. The traversal is on the ground(s) that the examiner has not set forth any basis why the apparatus claims cannot be examined simultaneously with the method claims or that any additional effort would be required. This is not found persuasive because as set forth in Paper Number 2, the respective inventions (method and apparatus) are distinct since the method can be practiced by another and materially different apparatus. For example, (i) the material web and coating do not have to be arranged using feed rollers, (ii) the glue (adhesive) does not have to be applied using a glue-applying roller, and (iii) the "heating step" can be accomplished by a heated platen or some additional component instead of a heated roller. Thus, it is clear that the respective inventions are distinct and restriction is proper.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Suga (JP 10-236093). As best depicted in Figures 1 and 2, Suga is directed to a

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method for bonding a coating 6 to a material web 10 comprising the steps of bonding/contacting the coating and the material web by glue (adhesive 5) via rollers 26, heating the thus bonded assembly via heated lamination roller 20, and removing air between the coating and the material web via suction path 35. As described on Page 6, Paragraph 44 of the attached machine translation, the vacuum suction path removes air disposed within slots 12 that are positioned between the coating 6 and the material web 10.

With respect to claim 2, Suga describes the use of a vacuum pump 40 to remove the air entrapped between the coating and the material web.

Regarding claim 4, Suga employs a cooling system 45 after performing the "air removal" step.

With respect to claim 19, Suga describes the coating as being transparent (Machine translation: Page 4, Paragraphs 24, 25, and 27).

4. Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Rieder (DE 3507667). As best depicted in Figure 1, Rieder discloses a method for bonding a film to a foam substrate comprising bonding/contacting the film and the foam, heating the thus bonded/contacted assembly, and removing air via a suction assembly. The method of Rider includes an aspirator means or vacuum pump 20, which activates the suction assembly. Furthermore, a cooling roller 29 is provided after the heating zone to cool/compress the assembly (Column 4, Lines 47-51).

5. Claims 1-4 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Amberg (US 3,616,197). Amberg discloses a method of bonding a liner of

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polypropylene film 21 or coating to a base plate/receptacle or material web using adhesive 20. As described in the Abstract, the method comprises the steps of (a) clamping or bonding/contacting the film 21 (having adhesive 20 thereon) against the surface of the plate 26, (b) heating the film and the plate, and (c) drawing a vacuum through the bottom of the plate to press the film firmly against the interior surface of the plate (removes air entrapped between film and plate).

Regarding claim 2, Amberg includes a vacuum pump 40 as the aspirator means.

With respect to claim 3, Figure 7 depicts the preferred method of Amberg in which a combination of positive air pressure and vacuum optimizes the engagement, and thus the removal of entrapped air, between the film and the plate (Column 5, Lines 32-60).

Regarding claim 4, Amberg includes cooling steps 38 and 48 after the air removal step or vacuum is completed (Column 6, Lines 32-38).

With respect to claim 19, the film or coating of Amberg is transparent (Column 5, Line 74+).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 4, 6, 7, 13, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rieder and further in view of Pohl (US 3,906,134). As previously

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stated, Rieder discloses a method for bonding a film to a foam substrate comprising bonding/contacting the film and the foam, heating the thus bonded/contacted assembly, and removing air via a suction assembly. In this instance, the film is supplied to the foam substrate from a feeding roller 21. In addition, the film/foam assembly is heated via a heated roller 24 directly after the film and the foam substrate are contacted/bonded and prior to the removal of air via the suction assembly. It is noted that roller/belt 24 is necessarily heated since it passes through the heating zone. Rieder, however, (a) is silent as to how the foam substrate is fed to the bonding assembly depicted in Figure 1 and (b) applies the adhesive to the foam substrate as opposed to applying it via a glue roller to the film. Regarding (a), one of ordinary skill in the art at the time of the invention would have found it obvious to provide the foam substrate of Rieder from a feed roller since base substrates are conventionally held in roll form and subsequently applied to a conveying system, as shown for example by Pohl (Figure 1, roll 1), which is similarly directed to the bonding of a film or facing 44 to a foam substrate 2. With respect to (b), although not described by Rieder, adhesives are extensively applied to films or coatings via a roll coater, as shown for example by Pohl. It is noted that Pohl depicts the application of adhesive to both the foam substrate and to the film or coating, further suggesting that one of ordinary skill in the art at the time of the invention would have readily appreciated the inclusion of a glue/adhesive applying roller in Rieder. As such, one of ordinary skill in the art at the time of the invention would have found it obvious to apply the adhesive in Rieder to the film via a glue/adhesive applying roller.

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Regarding claims 6 and 7, Rieder discloses the substrate as a foam, such as polyurethane. Although Rieder fails to expressly describe the substrate as being a "spandex mesh", spandex is nothing more than a specific polyurethane (one having thermoplastic elastomeric properties). One of ordinary skill in the art at the time of the invention would have readily appreciated the use of the general bonding techniques of Rieder to be applicable to the bonding of a coating/film to a "spandex mesh" or polyurethane.

Regarding claim 13, as previously mentioned, Rieder includes a cooling roller 29. It is noted that claim 13 contains language that requires the cooling roller to be positioned between the air removal means and the takeup roll. However, claim 13 (dependent from 21) does not require a takeup roll- the takeup roll is introduced in claim 12. In any event, the use of a takeup roll in the method of Rieder would have been obvious since this represents an extremely conventional and extensively used technique of holding/handling laminated assemblies.

With respect to claims 19 and 20, although Rieder fails to expressly describe the film as being transparent, it is clearly evident that it would have been within the purview of one of ordinary skill in the art at the time of the invention to select such a film depending on the desired final product. For example, the use of a transparent film would have been selected if the foam substrate had a pattern on the top surface or if it was desired for the top surface of the foam to be visible. Thus, the use of a transparent film in the method of Rieder would have been obvious to one of ordinary skill in the art at the time of the invention.

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8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Suga and Rieder as applied in Paragraphs 3 and 4 above, respectively, and further in view of Amberg. Suga and Rieder are both directed to a method of applying a film to a base substrate, wherein a suction assembly is provided from beneath the bonded assembly (film and substrate) to remove any entrapped air between the film and the base substrate while providing improved bonding between the same. While Suga and Rieder fail to include a blowing means in combination with the suction assembly, one of ordinary skill in the art at the time of the invention would have found it obvious to use the aforementioned combination since it is recognized in the bonding industry that bonding, when vacuum is used, is optimized when a blowing means is additionally provided, as shown for example by Amberg (Column 5, Lines 30-60). In this instance, Amberg recognizes the preferred use of both vacuum and a blowing means to establish a firm engagement between the film (liner) and the base substrate (base receptacle). Thus, the one of ordinary skill in the art at the time of the invention would have been motivated to include a blowing means in the method of either one of Suga or Rieder to optimize the bond between the film and the base substrate.

***Allowable Subject Matter***

9. Claims 8, 10, 12, 14, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. While Rieder and Suga disclose the general bonding steps of the claimed invention, including removing air



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between the base substrate and the film/coating, one of ordinary skill in the art at the time of the invention would not have been motivated to include an aspiration cylinder as the specific air removal means in the method of either Rieder or Suga. It is noted that suction or vacuum rollers are known per se, as shown for example by Hagino (US 3,655,486); however, these suction rollers are not provided to remove entrapped air between bonded layers but rather to form a large number of air cells on the laminates being produced (e.g. bubble wrap). This function is inconsistent with that desired by any of the prior art references of record and as such, the inclusion of a suction or vacuum roller in place of the specific air removal means of Suga, Rieder, and Amberg would not have been obvious to one of ordinary skill in the art at the time of the invention.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(703) 605-4397**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-2058. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Justin Fischer

October 9, 2003



JEFF H. AFTERGUT  
PRIMARY EXAMINER  
GROUP 1300